

REMARKS

In the instant application, Claims 1-25 are pending. Claims 8-25 have been withdrawn from consideration. Reconsideration of the pending claims in view of the following remarks is respectfully requested.

Claim Rejection Under 35 U.S.C. § 102/103

Claims 1-7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over US Patent No. 3,639,301 (Youker). Applicants respectfully traverse this ground of rejection and reassert their previous Remarks as filed in the Response and Amendment dated May 12, 2008.

Applicants submit to anticipate a claim the cited art must teach each and every element of the claimed invention, either explicitly or inherently. And similarly, to render a claim obvious the cited reference must provide a clear teaching, suggestion or motivation to one skilled in the art at the time just before the invention was made to modify the cited art to arrive at the claimed invention. Applicants submit that Youker neither teaches each and every element of the claimed invention, either explicitly or inherently, nor does it render the present invention obvious.

Youker discloses a polychloroprene latex useful for making polyisocyanate-modified foams. The latex is produced by heating a freshly prepared polychloroprene latex, having a pH higher than 11, at a temperature in the range of 60 to 90°C until the pH is lowered to the range of 9.5 to 10 (column 1, lines 16 to 21). Column 2, lines 39 to 42 explicitly teaches that a controlled pH-drop is critical to the production of the desired type of heat-aged latex, since the desired type of foams is not obtained if the pH is not lowered below about 10.

Even though it is referenced that a pH-drop is observed in aqueous polychloroprene dispersions because of the release of hydrochloric acid from the polychloroprene and said pH-drop is one of the reasons for a gradual decrease in stability with age

(column 1, lines 44 to 52). Youker is directed to an aqueous dispersion useful for forming a foam not to provide long term storage-stable aqueous polychloroprene dispersions. Applicants submit there is no motivation in Youker to prepare a long term storage-stable dispersion. The teachings of Youker are explicit at Column 2, lines 44 to 48, wherein it is taught that the latices of Youker are characterized by having adequate stability for normal storage and handling at the same time having the property of forming elastomeric foams having high-load-carrying ability in proportion to their density. It can also be seen from the examples in Youker that the long-term storage stability is not the teachings of Youker because the heated polychloroprene latices having a pH in the range of 9.5 to 10 of Youker are used directly (without storing) to prepare foams.

In the alternative, the present invention relates to an aqueous polymer dispersion, obtained by preparing an aqueous polychloroprene dispersion with a gel content of 0.1 wt.-% to 30 wt.-%, and subsequently storing the dispersion at temperatures of from 50 to 110°C until the gel content has risen by at least 10 wt.-% to 1 to 60 wt.-%, based on the polymer, wherein the aqueous polymer dispersion does not have a significant drop in pH after storage.

The present invention provides an aqueous polychloroprene dispersion which is distinguished by a long storage stability, which in adhesive formulations achieves a gluing of high initial strength and high heat resistance and which has a significantly higher reactivity towards polyisocyanate dispersions as taught at page 3, lines 1 to 6 of the present invention.

The pending application at page 2, lines 14 to 20 teaches that the long storage stability of aqueous polychloroprene dispersions has been a problem before the present invention, because the pH of alkaline aqueous polychloroprene dispersions decreases after a short storage time and thereby makes the aqueous polychloroprene dispersions unstable. Providing storage-stable aqueous polychloroprene dispersion formulations useful as adhesive formulations is achieved by the aqueous polymer dispersion according to Claim 1.

Accordingly the gel content and the storage conditions claimed in the present invention are two features essential to obtain storage-stable aqueous polychloroprene dispersions useful for adhesive compositions. The examples of the present application further support that both features are essential for obtaining storage-stable aqueous polychloroprene dispersions useful for adhesive compositions. In Table 2a on page 16 of the present specification it is clearly shown that the storing-step b) is essential to avoid a significant drop in pH after storage and thereby an instability of the aqueous polychloroprene dispersions. It can be seen from table 2a that a clear pH-drop after storage takes place if the aqueous polychloroprene dispersions are not stored according to step b) in claim 1. In table 2c, page 18 of the present specification it is shown that also the gel content is an essential feature for obtaining storage-stable aqueous dispersion formulations useful for adhesive compositions. It is clearly shown that at high gel content of the dispersions the strength and heat resistance are adversely influenced by the poor stability of the formulations to be activated.

As discussed before, the aqueous polychloroprene dispersion according to the present invention clearly differs from the aqueous polychloroprene dispersion according to Youker et al. in the gel content as well as in the pH-value after storing.

Whereas the gel content is not a relevant feature in the polychloroprene dispersion according to Youker, the gel content is of particular relevance in the aqueous polymer dispersions according to the present invention, because of the usability of the aqueous polymer dispersions for the preparation of adhesive formulations. Further, the aqueous polymer dispersions according to the present invention do not have a significant drop in pH after storage, whereas according to Youker a controlled pressure drop from higher than 11 to below 10 is mandatory. There is therefore a difference between the aqueous polychloroprene dispersions according to the present claims and the aqueous polychloroprene dispersion according to Youker in the gel content as well as in the pH-value. The polychloroprene dispersions according to the present invention are therefore clearly novel over Youker.

It is mentioned in Youker that the polychloroprene dispersions according to Youker are specifically prepared for making polyisocyanate-modified foams. It is clearly taught in column 2, lines 39 to 42 of Youker that the lowering of the pH is critical to the production of the desired type of heat-aged latex. If the pH is not lowered below about 10, the latex will not give the desired type of foams, especially foams modified by polyisocyanates. However, the aqueous polychloroprene latex according to the present invention is not intended for the use to prepare foams but for the use in adhesive formulations. It was not obvious for a person skilled in the art that aqueous polychloroprene dispersions useful for the preparation of adhesive formulations have to fulfill the claimed features, a gel content of the starting dispersion of from 0.1 to 30 wt.-% as well as a pH which is not significantly lower than the pH of the freshly prepared aqueous polychloroprene dispersion because of a specific storing step.

Applicants submit the pH drop by ageing in the process of Youker from a pH of higher than 11 to a pH in the range of from 9.5 to 10 indicates that the starting freshly prepared polychloroprene latex according to Youker is different from the starting aqueous polychloroprene latex with a gel content of 0.1 wt.-% to 30 wt.-% according to the present invention, since a significant drop in pH by ageing does not occur in the process for preparing the polymer dispersions according to the present invention. Accordingly, Applicants submit Youker fails to render the present invention obvious to one skilled in the art at the time the invention was made. Therefore, Applicants request withdrawal of this ground of rejection and Applicants submit the present invention is in condition for allowance.

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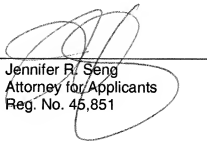
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Respectfully submitted,

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